

Share, Steal, or Buy? A Social Cognitive Perspective of Music Downloading

ROBERT LAROSE, Ph.D.¹ and JUNGHYUN KIM, Ph.D.²

ABSTRACT

The music downloading phenomenon presents a unique opportunity to examine normative influences on media consumption behavior. Downloaders face moral, legal, and ethical quandaries that can be conceptualized as normative influences within the self-regulatory mechanism of social cognitive theory. The music industry hopes to eliminate illegal file sharing and to divert illegal downloaders to pay services by asserting normative influence through selective prosecutions and public information campaigns. However the deficient self-regulation of downloaders counters these efforts maintaining file sharing as a persistent habit that defies attempts to establish normative control. The present research tests and extends the social cognitive theory of downloading on a sample of college students. The expected outcomes of downloading behavior and deficient self-regulation of that behavior were found to be important determinantes of intentions to continue downloading. Consistent with social cognitive theory but in contrast to the theory of planned behavior, it was found that descriptive and prescriptive norms influenced deficient self-regulation but had no direct impact on behavioral intentions. Downloading intentions also had no direct relationship to either compact disc purchases or to subscription to online pay music services.

INTRODUCTION

THE NEW MEDIA provide abundant opportunities to reexamine theories of media selection. Among the distinguishing qualities of new media are the abilities to communicate directly with other members of the audience, share content with other audience members, and experiment with new models for distributing and financing the media. Mastery of new media forms also requires a certain degree of skill on the part of the user, which "old" mass media systems may not, or at least no longer, require. New media also pose moral dilemmas to users who consume some of the more problematic forms of new media. While examples of these qualities can be

perhaps be found in conventional media systems, the advent of the new media and in particular the Internet make them foci for our attention.

The present research builds upon a re-imagining^{1,2} of a well-known theory of media selection and attendance, uses, and gratifications.³ In this re-imagining of the model, conventional conceptions of the uses of the media and the gratifications derived from them have been redefined as expected outcomes as understood in Social Cognitive Theory (SCT).⁴ The expected outcomes may be categorized into different types of incentives which motivate human behavior. These are novel stimuli, enjoyable activity, economic, social, status, and self reactive incentives. Conceptions of uses and gratifications for conventional media seem

¹Department of Telecommunication, Information, Studies, and Media, Michigan State University, East Lansing, Michigan.

²School of Communication Studies, Kent State University, Kent, Ohio.

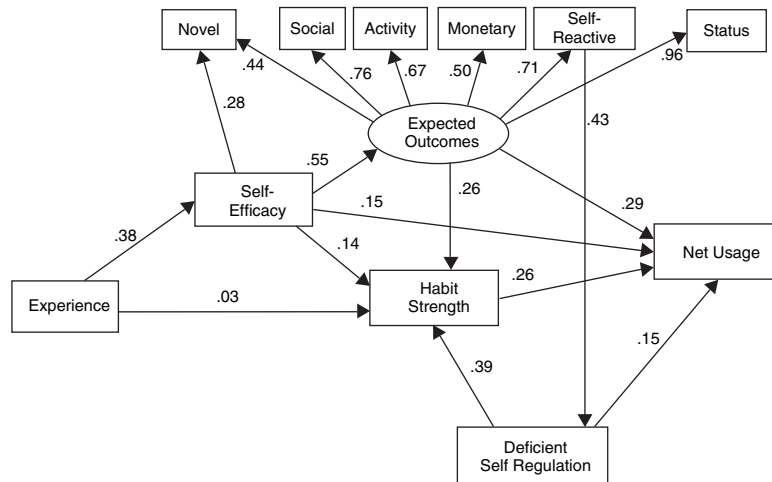


FIG. 1. Path analysis of social cognitive model of Internet usage (LaRose and Eastin, 2004).

to be particularly lacking in consideration of economic and status incentives, while self reactive incentives, such as media exposure intended to moderate one's mood, has been confounded with other gratification dimensions. The revised model also includes self-efficacy,⁵ one's belief in his/her ability to successfully complete an action to attain important outcomes. The socio-cognitive of self-regulation^{6,7} is also reflected in the model as deficient self-regulation, defined as a state of inadequate self control over media behavior. This conceptualization includes the notion of habit, the repetition of behavior without active self instruction, within the notion of deficient self-regulation.

Figure 1 is a representation of this model as it was applied to general Internet usage.¹ Note that expected outcomes, self-efficacy, and deficient self-regulation contribute directly to intentions to perform media behavior. A connection between self-reactive outcomes and deficient self-regulation is an important one since it is implicated in the formation of unregulated, repeated, habitual behavior. In some extreme circumstances when excessive use causes serious life consequences (e.g., divorce, loss of a job, dropping out of school, failing to finish one's paper on time), such behavior might be termed "addictive."²

The present paper applies this model to a particular instance of internet usage which is both highly controversial and international scope, the downloading of media files. Downloading continues to be a popular internet activity, particularly among young adults,⁸ despite efforts on the part of the recording industry to prosecute the behavior and to popularize pay alternatives to free downloading. The behavior is controversial because the recording industry continues to claim that it cuts into the

sales of conventional compact disc recordings estimated to be as much as \$16 billion per year.⁹ Still, even as downloading continued in 2004 CD sales increased, only to fall again in 2005 as pay music services and video games cut into CD revenues.¹⁰

Previous research suggests why industry efforts have thus far been less than completely effective: downloading appears to be as much a social phenomenon as an economic one.¹¹ That is, downloaders of free, so-called "pirate" music seem to be more motivated by the social aspect of trading and sharing music with other music enthusiasts rather than the proposition of saving money on music purchases. Moreover, it appears downloading has a habitual, almost addictive, quality for many users. The previous research on downloading behavior also identified social norms as potential determinants. Specifically, the perception that one's university was opposed to participating in downloading was found to have a negative influence on downloading. However, the normative variables were not conceived within a consistent theoretical framework and there were problems with respect to reliability of measurement.

Normative influences on media behavior have lately become a topic of considerable interest in the field of communication.¹² Within SCT that framed prior downloading research, norms may be conceived as part of the self regulatory mechanism.^{6,7} A variety of normative varieties have been identified. These include personal norms which compare behavior to personal standards for conduct, social norms which compare behavior to socially acceptable standards, collective norms which invite comparisons to the behavior of groups, and moral norms that provide comparisons to standards of conduct associated with ethical belief systems.

Norms act through the judgmental process component of the self-regulatory mechanism.

Norms act in conjunction with the two other subprocesses of this mechanism, self-observation and self-reactive influence. According to SCT, we are constantly observing our own behavior and judging its appropriateness compared with norms of appropriate conduct. If we find that our behavior is inconsistent with our norms then we may apply self-reactive incentives to modify our behavior. These incentives might include indulging feelings of guilt or providing ourselves with rewards for improved behavior that bring us back in compliance with norms. For example, if a college student learned from a newspaper article that her downloading behavior was excessive compared to other college students, she might engage self-reactive influence by indulging feelings of guilt the next time she thinks about visiting her favorite downloading site. Or, she might "treat herself" to a store-bought CD release from her favorite band as a reward for giving up her life of piracy.

As such, normative influences could act to counter deficient self-regulation. Even deeply habitual, perhaps almost "addictive" behavior might be moderated through the influence of salient norms. The self-regulatory mechanism of SCT explains how so many people recover from addictions, even chemical dependencies, on their own: They are able to observe the excessiveness of their behavior in reference to appropriate norms and apply self-reactive influences that moderate the excesses.¹³ Indeed, without effective self-regulation we might expect nearly everyone to be a "media addict" (and also an alcoholic) since there are times in most peoples' lives when they engage in excessive media use to relieve dysphoric states.² Returning to the model of media behavior outlined previously this would indicate that normative influences would precede deficient self-regulation. That is, they would act as variables that could cause decreases in the degree of deficient self-regulation and therefore serve to moderate excessive consumption.

However, normative influences might also act to further deficient self-regulation and *increase* excessive consumption patterns. For example, persons might compare their behavior to lax social norms describing the conduct of others who engage in even more excessive media consumption patterns. In the context of downloading, if our online associates in the "community" of downloaders have even larger hoards of pirated music than we do and brag about it in our online exchanges, that provides a descriptive norm which could encourage less self-regulation and

more excessive downloading. Persons might also compare their behavior to dubious ethical standards, such as rationalizing downloading behavior to oneself as something that is the responsibility of the music industry rather than the individual to stop or that is a justifiable means to counter the excessive pricing policies of the music industry.

A competing view of normative influences is provided by an alternate theory of human behavior, the Theory of Planned Behavior (TPB).¹⁴ The best known normative component of that theory is the subjective norm or the perceived social pressure to perform or not perform a behavior. Together with attitudes and Perceived Behavioral Control (PBC), subjective norms are the basic determinants of behavioral intentions and behavioral intentions along with PBC predict actual behavior. The subjective norm is typically defined in reference to specific behaviors and specific significant others whose wishes are salient with respect to the behavior in question and with whom there is a motivation to comply. In the case of downloading, for example, one's university, one's parents, or one's fellow music pirates might be relevant significant others.

A variety of additions to the basic TPB model have been proposed which might also be construed as normative influences. These include moral norms, or an individual's perception of the moral correctness or incorrectness of performing a behavior¹⁵; self identity,¹⁶ which is the salient part of an actor's self which relates to a particular behavior; personal norms dictated by personal rather than societal values¹⁷; descriptive norms¹⁸ referenced to the perceived behavior patterns of others, and perceived moral obligation which is the level of morality a person has in a given situation.¹⁹ These concepts typically account for modest increments of a few percent in the variance explained in behavioral intentions compared to the basic TPB model.¹⁵

However, within TPB normative influence is believed to act directly on behavioral intentions or through the other basic components of the model (attitudes, subjective norms, and PBC) rather than through intermediate processes of self regulation.¹⁴ TPB does not recognize this mechanism nor consider the possibility of deficient self-regulation. In part this is because TPB is, after all, a theory of *planned* behavior. That is, it applies to behaviors that are under volitional control and which by definition are effectively self-regulated. Indeed, habitual behaviors are dismissed by the leading TPB researcher.^{14,20} To the extent that prior behavior, a.k.a. habit strength, determines future behavior this is even regarded as a lack of sufficiency in the explanatory constructs. Nonetheless, habit, usually

understood as the frequency of past behavior, can explain additional variance in behavior.^{15,21}

The other elements of the SCT model identified previously can also be translated into TPB terms.²² Expected outcomes are defined as behavioral beliefs about the expected consequences of a behavior in TPB. When combined with the evaluation of those beliefs (i.e., the degree to which the outcomes are either good or bad), the behavioral beliefs define attitudes. TPB also contains a parallel to self-efficacy, Perceived Behavioral Control (PBC), or people's conception of the ease or difficulty of performing the behavior of interest.¹⁴ Both of these variables theoretically have direct and indirect effects on behavioral intentions.

Thus, although the paradigm of new media behavior shown in Figure 1 can be understood both within SCT and the TPB, there are competing predictions for the role of social norms to take. Specifically, do they act directly on behavior or do they act on behavior through or in combination with self-regulation? To examine this question we first revisited the basic model of new media behavior within the specific context of downloading, shown in Figure 2. The present research used path analysis to compare contrast the two theoretical approaches to understanding the relationship of norms to behavioral intentions within the base model of downloading behavior. The competing hypotheses models are shown in Figures 3A (SCT) and 3B (TPB).

The model shown in Figure 2 differs in several respects from Figure 1. Based on an exploratory factor analysis (Table 1), the expected outcomes were categorized as social, novelty seeking, and economic, consistent with prior research.¹¹ The "social" outcome dimension included items that suggested the use of downloading to regulate

dysphoric moods (i.e., self-reactive incentives) and so these were linked directly to deficient self-regulation in accordance with LaRose et al.² Although measures of both habit strength and deficient self-regulation were included, these were not distinguishable in the current data and so were combined into a single deficient self-regulation construct. Habit may be construed as a failure of the subprocesses of self-regulation, self-observation, while deficient self-regulation may be connected to the failure of judgmental process and self-reactive influence. However, the distinction is not always clear² and here deficient self-regulation is understood to span all three sub-processes. In this case there were no significant paths from self-efficacy to either behavioral intentions or to deficient self-regulation and also no path from expected outcomes to deficient self-regulation. Only a social outcomes to deficient self-regulation path was found. These results could indicate a deeply habituated pattern of media use in which the self-reactive incentives contained in the social outcomes variable are undermining self-control. Finally, an inspection of the modification indices suggested a correlated error terms between novelty and economic outcomes, not shown. Details of the model are found in the results section.

The conceptualizations of normative variables are quite diverse, overlapping (e.g., the distinction between self-identity and personal norms is unclear), and even somewhat conflicting (e.g., personal norms in TPB are related to values while personal norms in SCT are referenced to personal standards for repeated behavior) both within and across theoretical paradigms. Accordingly, the present research began with a collection of normative statements in an attempt to define the normative domain with

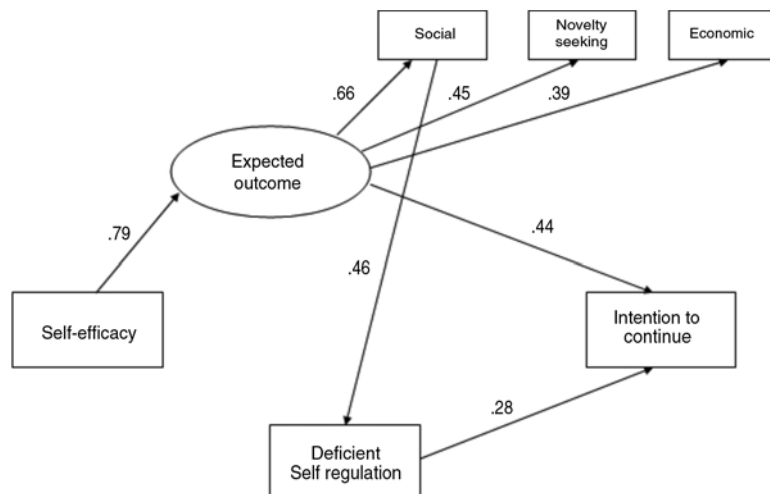


FIG. 2. A socio-cognitive model of downloading behavior. The summary results of the initial path model: $\chi^2 = 9.53$ ($p = \text{n.s.}$), $df = 7$, $CFI = .98$, $RMSEA = .05$. All the paths in the model are statistically significant at $p < .001$.

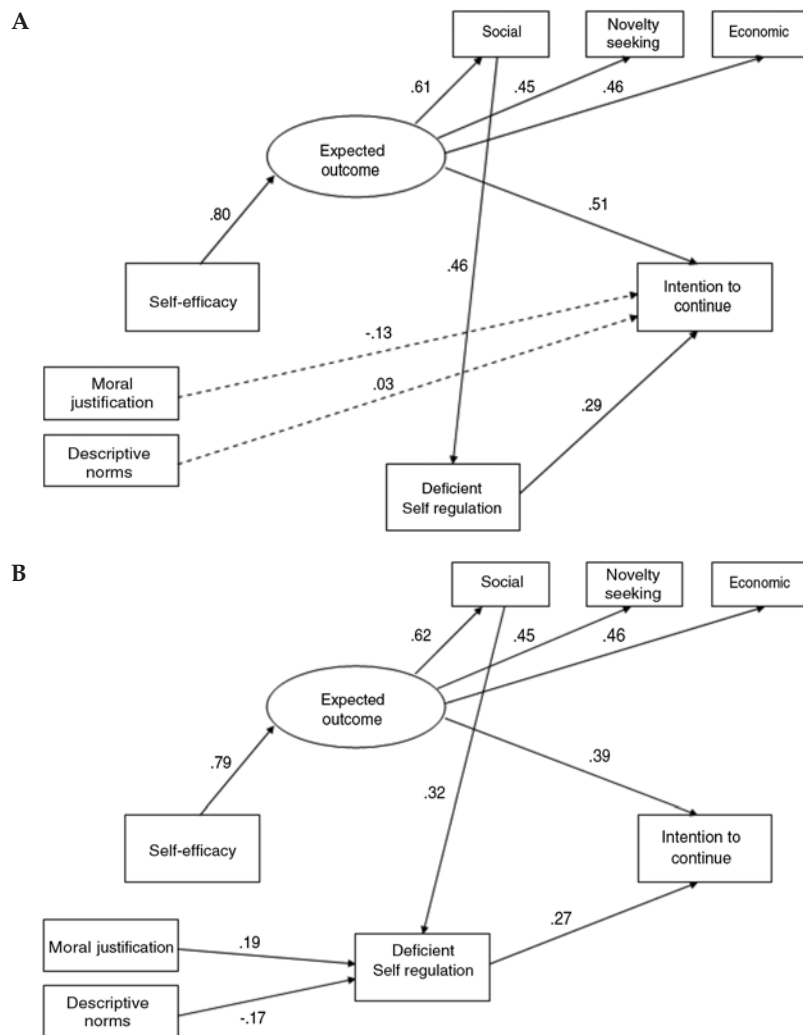


FIG. 3. (A) Final SCT model of normative Influence. **(B)** Final TPB model of normative Influence. For A, the summary results of the initial path model: $\chi^2 = 30.33$ ($p < .05$), $df = 15$, CFI = .94, RMSEA = .09; all the paths in the model are statistically significant at $p < .01$, except two paths from moral justification to deficient self-regulation and from descriptive norms to deficient self-regulation were significant at $p < .05$. For B, The summary results of the initial path model: $\chi^2 = 24.2$ ($p < .05$), $df = 13$, CFI = .956, RMSEA = .08; all the paths in the model are statistically significant at $p < .01$, except two paths from moral justification to intentions to continue down loading and from descriptive norms to intentions.

respect to downloading behavior. We also considered the possibility of comparisons of downloading behavior to lax moral norms which we call moral justifications, statements typical of the excuses given by college students for participating in what is, after all, an unethical and illegal behavior.

Finally, we revisited the questions that have pre-occupied so much of the discussion of downloading behavior: Their impact on compact disc sales and also the effects of new pay downloading services on free downloading, also known as copy-right piracy.

METHODS

Samples and procedures

Students in residence at a large Midwestern university were randomly selected from the entire on-campus population and were recruited by campus

mail invitations to participate in an online survey. Computer ownership was required of all students by the university in question.

Two mail invitations were sent. The first mailing included a cover letter signed by the main researcher explaining the purpose of the research and the URL of the web survey site along with a unique ID for each respondent. For all the 600 letters sent out in the first round, 25-cent coin was included as a token of appreciation. After a week, follow-up reminders were sent to non-respondents. The response rate was thirty-one percent or 188 respondents out of the 600 mailings sent. Among the 188 participants those who never downloaded any file from the Internet were excluded, which resulted in 134 participants included in the present analysis. The sample consisted of exactly half males and half females. Ages ranged from 18 to 27, but about 70 percent of the entire sample was under the age of 21.

TABLE 1. MEANS AND STANDARD DEVIATIONS OF SCALE ITEMS

<i>Scale/item</i>	<i>Mean</i>	<i>SD</i>
Moral justification	4.42	1.23
It's up to the record industry to prevent piracy, not me.	4.04	1.49
Everyone else is downloading music, it's OK for me to do it.	4.47	1.53
There is nothing wrong with file sharing.	4.75	1.68
Descriptive norms	5.82	1.12
I am an Internet "pirate" and am proud of it. (reflected)	5.36	1.69
I know lots of people who download more than I do.	6.43	1.00
I download less than the typical college student.	5.67	1.49
Self-efficacy	3.86	1.32
I know all of the tricks and traps of file sharing.	2.87	1.84
I know how to avoid spy ware attacks when I use file sharing.	3.92	1.90
I know how to use file sharing software.	5.25	1.66
I know how to avoid detection by the authorities when I file share.	3.11	1.81
I know how to tell the good files from the bad files.	3.68	1.82
I am confident I won't get caught downloading illegal files.	4.30	1.50
Deficient self-regulation (DSR)	2.35	1.01
I sometimes download files without thinking why I want them.	2.81	1.74
My downloading is out of control.	1.69	1.10
I spend so much time downloading that it is interfering with my life.	1.49	.86
Downloading is a habit I have gotten into.	3.42	1.78
Expected outcomes		
Social outcomes	3.48	1.17
I cheer myself up.	4.43	1.66
I'll impress my friends with my music collection.	3.27	1.76
I meet new friends online.	2.54	1.57
I get a break from my daily routine.	4.32	1.60
I feel a sense of community with the people I share with.	2.86	1.82
Novelty seeking	5.51	1.19
I learn about new types of music that I enjoy.	5.62	1.42
I will get exposed to new music.	5.64	1.28
I can find rare songs.	5.28	1.68
Economic outcomes	5.82	.99
I can save a lot of money.	6.07	1.18
I can make my own custom mixes.	5.50	1.64
I can listen to more of my favorite music.	5.88	1.06
Intentions to continue downloading	2.76	1.22
Download more this month than last month.	2.63	1.44
Switch to a new file sharing program that works better than the one I use now	3.03	1.69
Offer files on my computer for others to share.	2.60	1.82
Pay service intents		
Begin subscribing to one of the online pay music services.	3.34	2.49
CD purchases		
Number of CDs purchased last month	.75	1.32
Self-identity	3.94	1.39
As far as I know, I have never downloaded an illegal file.	3.63	1.78
I am a law-abiding "netizen" online.	4.26	1.46
Subjective norm	4.62	1.22
My parents don't want me to share files.	3.76	1.84
My university doesn't want me to share files.	5.47	1.22
Moral norms	3.51	1.40
Copyright privacy is morally wrong.	3.84	1.64
Artists are hurt by file sharing.	3.39	1.87
The industry is right to sue people who download illegally.	3.30	1.69

MEASURES

An exploratory factor analysis revealed five normative dimensions that corresponded with many of the conceptual variables outlined previously. *Moral justification* reflected how much people justify the morality of their behavior. *Descriptive norms* measured how much people compared their downloading behavior to that of others. The *moral norm* included statements about the morality of downloading. *Self-identity* was referenced to a law-abiding conception of self, while *subjective norm* was comprised of beliefs about the desires of parents and the university with respect to downloading.

The other variables used for the analysis included *self-efficacy*, which measured participants' confidence in their ability to perform downloading successfully, including their ability to elude punishment. *Deficient self-regulation* indicated participants' lack of self-control. *Expected outcomes*, which refer to participants' expected positive outcomes of the file downloading, consisted of three sub constructs identified through exploratory factor analysis: *social outcomes* (i.e. downloading as an enjoyable social activity that relieves boredom and elevates mood), *novelty seeking* (i.e. obtaining variety of downloads), and *economic outcomes* (i.e. efficient use of monetary and personal resources). *Download intentions*, a dependent variable, was to measure participants' intentions to continue file sharing behavior during the following month.

Missing data were replaced with mean values. Pay service intent and CD purchases were measured by single items, respectively. Those who indicated that they currently subscribed to a pay music service were assigned a score of 7 on the seven-point scale of intentions to begin subscribing to a pay music service. All items save for the behavioral intentions were measured on seven-point, Lickert-type agree-disagree scales, where strongly disagree was scored 1 and strongly agree was scored 7. All the multi-item scales were treated as a single indicator by taking the mean value of all the items in each construct. Behavioral intentions were assessed on a 7-point scale ranging from very likely (7) to very unlikely (1). The means and standard deviations of these scales and their component items are shown in Table 1.

RESULTS

The hypothesized model was tested using AMOS 6.0 structural equation modeling program.²³ The

data analysis followed guidelines suggested by Raykov et al.²⁴ Comparative Fit Index (CFI) scores above 0.90 provide reliable evidence of acceptable fit.^{25,26} While a value below 0.06 means good fit of the model in case of the Root Mean Square Error of Approximation (RMSEA), values between 0.08 and 0.10 indicate a mediocre fit and values over 0.1 a poor fit.²⁷

As indicated above, the present study started from testing an initial theoretical model¹ of the Internet usage behavior. Here, habit and deficient self-regulation were combined in the basic model used in this study. In addition, a new factor structure was used for expected outcomes: social outcomes, novelty seeking outcomes, and economic outcomes. There were four insignificant paths from the path analysis results: from self-efficacy to downloading intention ($\beta = .16, p = .32$); from self-efficacy to deficient self-regulation ($\beta = .06, p = .76$); from expected outcome to deficient self-regulation ($\beta = .09, p = .77$); and from expected outcome to downloading intention ($\beta = .25, p = .22$). The first three insignificant paths were taken out from the initial model. Figure 2 is the result of the corrected model. Modification indices suggested that a correlated error term between novelty seeking and economic outcomes improved the fit of the model (not shown).

To this modified base model, moral justification and descriptive norms, which are believed to be related to deficient self-regulation, were added. The other three normative variables were found to have no significant relationship to either deficient self-regulation or to behavioral intentions (Table 2) and so were dropped from the analysis. Figure 3A is the path analysis result of the final model based on SCT, in which norms preceded deficient self-regulation. Figure 3B is the path analysis following the TPB, in which norms are expected to have a direct effect on behavioral intentions.

In terms of the final SCT model, the data showed acceptable fit to the model with $\chi^2 (15, n = 134) = 30.33, p < .05$, CFI = .94, RMSEA = .09. All the hypothesized paths in the model showed expected signs and were statistically significant. Moral justification ($\beta = .19, p < .05$) and descriptive norms ($\beta = -.17, p < .05$) were direct causal antecedents to deficient self-regulation. The positive coefficient for moral justification indicates that the more moral justification respondents had for downloading, the more deficient was their self-regulation. The negative coefficient for descriptive norms indicates that the less excessive one's downloading was perceived to be compared to others, the more deficient was self-regulation. In turn, deficient self-regulation had

TABLE 2. RELIABILITY ESTIMATES AND INTERCORRELATIONS FOR INDEPENDENT AND DEPENDENT VARIABLES

Scale	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Moral justification	(.69)												
2. Descriptive norms	-.18*	(.71)											
3. Self-efficacy	.38**	-.50**	(.84)										
4. Deficient self-regulation	.34**	-.35**	.32**	(.71)									
5. Social outcomes	.38**	-.48**	.50**	.47**	(.73)								
6. Novelty	.31**	-.25**	.37**	.22**	.29**	(.75)							
7. Economic	.41**	-.21*	.34**	.14	.29**	.37**	(.64)						
8. Download intent	.32**	-.26**	.44**	.43**	.46**	.23**	.07	(.66)					
9. Pay service intent	-.12	.17	-.17*	-.01	-.00	.05	-.14	.15	N.A.				
10. CD purchase	-.18*	.04	-.03	-.11	-.01	.18*	-.16	-.13	.11	N.A.			
11. Self identity	.06	.28**	-.37**	.04	.16	-.11	-.17*	-.11	.07	.08	(.63)		
12. Subjective norm	-.21*	.17*	-.09	.04	-.07	.02	.10	-.09	.03	-.03	.06	(.38)	
13. Moral norms	-.36**	.25**	-.20*	.02	-.02	-.17	-.23**	-.15	.07	.15	.14	.35**	(.73)

* $p < 0.05$, ** $p < 0.01$.

Diagonal elements are Cronbach alpha coefficients.

a significant direct impact on intention to continue downloading ($\beta = .27, p < .01$). Self-efficacy had a direct impact on expected outcomes ($\beta = .79, p < .05$) and also had an indirect impact on intention to continue downloading through expected outcomes ($\beta = .39, p < .01$). Expected outcomes turned out to be a second-order factor consisting of social outcome ($\beta = .62, p < .01$), novelty seeking ($\beta = .45, p < .01$), and economic outcomes ($\beta = .46, p < .01$). Not shown are correlated error terms suggested by modification indices. These linked descriptive norms to self-efficacy and moral justification to self-efficacy and expected outcomes.

Predictive power of the model was indicated by the size of R^2 of endogenous variables. Sixty-one percent of the variance in the expected outcomes was explained only by self-efficacy. Twenty-four percent of the variance in deficient self-regulation was explained by moral justification and descriptive norms. Finally, 30% of the variance in the intention to continue downloading was accounted by deficient self-regulation and expected outcomes.

The final TPB model also yielded an acceptable fit, but only after adding correlated error terms between moral justification and descriptive norm variables and between descriptive norms and social outcomes (Fig. 3B). However, neither of the paths from the normative variables to behavioral intentions (shown in dotted lines) was significant, so the TPB formulation of normative influence was not supported. In this model, normative variables were not connected to any of the other variables except through correlated error terms.

DISCUSSION

Thus, the model of normative influence derived from SCT was superior to one derived from TPB in the present research. Specifically, descriptive norms and moral justifications preceded deficient self-regulation as a predictor of intentions to continue illegal downloading. These findings are consistent with the self regulatory mechanism found within SCT.

None of the normative influences were found to have a direct effect on downloading intention. Even though prior research suggested the influences of subjective norm involving one's university,¹¹ in the present case the subjective norm had no direct impact on downloading behavioral intention and also it did not affect the self regulatory variable. Here, subjective norms referenced to two significant others (parents and university) were combined, but post hoc analysis revealed

that neither was significantly related to intentions ($r = -0.095$ and -0.045 , respectively). Since both the prior study and the present one were drawn from the same general university population, this null result is somewhat puzzling. It maybe persistent downloaders came to ignore their university's efforts to crack down on piracy in the two year gap between the two studies. An instructive example: in the first author's class a student reported that he was among those caught up in the most recent dragnet of the Recording Industry Association of America and as a consequence had been subjected to an escalating series of punishments by the university, ending in his disenrollment from the university. This individual expressed a casual attitude towards the actions of his university, rationalizing that in the end he could just move on to a university in the next state and begin downloading again!

From the perspective of the TPB one might conclude that downloading behavior is an instance of one which is not under normative control; that there was no direct relationship between the subjective norm and behavioral intentions. However, it is also possible that by failing to incorporate self-regulatory processes this theory underestimates and fails to understand the impact of norms. Indeed, the subjective norm is one of the weakest components of the model and perhaps this is one reason why. But also, normative concepts were not assessed in exactly the way prescribed by TPB, which requires that the motivation to comply with each significant other also be assessed and that the relevant others be elicited from representative members of the population.¹⁴

The importance of deficient self-regulation in predicting behavior poses a challenge to the core tenets of TPB. If self-regulation is where the influence of habit resides, then the present results suggest that should supplant social norms in the model. After all, norms are only one component of the self-regulatory mechanism. Cases like this one in which subjective norms failed to predict behavioral intentions could still be under the control of self-regulation, or its lack. The approach²⁸ followed here conceptualizes habit as a mental process rather than as an association between measures of past and prospective behavior. This holds the possibility of a broader theory of new media behavior, and indeed all human behavior, that integrates both conscious and non-conscious processes.²⁹

Limitations

The use of a college student sample imposes limitations on the generalizability of the present

findings. They were based on the responses of students at only a single mid-western university in the United States. The responses of college students may not be representative of the entire population of online downloaders.

Furthermore, there continued to be difficulty in obtaining reliable measurements of normative concepts related to downloading behavior, particularly for the subjective norm. Perhaps more reliable measure would have produced direct relationships between norms and behavioral intentions. However, internal consistency reliability is not much valued within TPB. It is expected, for example, that significant others will vary in their attitudes towards a behavior, it is for that reason that such responses should be weighted by the motivation to comply. For example, if someone believes that their university wants them to stop downloading, but they, like the student mentioned earlier, are not motivated to comply with university rules then the subjective norm will have no effect.

The present research used behavioral intentions as the dependent variable rather than actual downloading behavior. However behavioral intentions are generally recognized as reliable predictors of behavior provided that the intention is restricted to a specific time frame (one month in the present case) and a specific behavior. Still, it may be the time frame selected was too broad and the behavioral intention, referenced to all forms of downloading, also lacked sufficient specificity.

Finally, the present study was cross sectional in nature. Path analysis can help us test hypotheses about the direction of causation and causal mechanisms but cannot establish it unambiguously. Indeed, there is a likelihood of reciprocal causation among the variables.

Future research

The role of normative influences on media behavior should continue to be a topic of interest even if, as in the current case, no direct relationship is found with behavioral intention. That is because normative variables have the potential to be used in interventions aimed at moderating excessive media consumption behavior. These are of overriding importance in the present context for industry actors who believe it is in their interest to deter downloading. However, there are many forms of problematic media use including the consumption of violent television by children and adolescents, online gambling, online pornography, unrestrained participation in "social networking" websites, and excessive trolling for

scholarly citations in online databases at the expense of original thinking.

Strategies which activate or change social norms might be effective in modifying these behaviors. Subjective norms act in the "right" direction from the perspective of curbing piracy, but their impact is weak. Efforts by the university and the industry to convince college students that downloading is morally wrong apparently have little impact. On the face of the present results the most effective strategy might be to convince heavy downloaders that their behavior is out of line with their peers, activating descriptive norms that might moderate downloading rather than promote it. However, that strategy might further encourage infrequent downloaders who might be surprised to hear that others are more wicked pirates than they. The music industry's legal strategy, publicizing and expanding selective prosecutions of music pirated, could bolster moral norms, but these were ineffective in the present data. They might also act by creating expected negative outcomes; specifically, the belief that downloading will result in legal prosecution or expulsion from school. However, these also were unrelated to intentions to continue downloading in the present research ($r = -0.045$, $p = \text{n.s.}$). Another strategy purportedly, if not admittedly, followed by the industry is to fill download directories with corrupted and incomplete files, but expectations of receiving such files also had no bearing on intentions ($r = -0.013$, n.s.).

Continued research into other aspects of self regulatory mechanisms would also be of interest. For example, how can we define the exact point at which a media behavior begins to elude the volitional control of the individual and the conditions that affect it? How might we identify and modify the cognitive schemas which subsequently guide behavior without further active self instruction? There is a growing literature on automatic behavior²⁹ that might further inform this research in the new media realm and also provide important additions to both SCT and TPB. After all, if we wish to understand human behavior, why limit ourselves just to those behaviors which are actively considered with each repetition? It is quite possible that these account for a rather small percentage of all behavior and indeed surprisingly little behavior in the realm of media whether new or old.

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Address reprint requests:

Dr. Junghyun Kim, Ph.D.
D101E Music and Speech Building
Kent State University
Kent, OH 44242

E-mail: jkim23@kent.edu

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